

"Say cheese!" Wild animals caught on camera

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An Australian Koala looks at a camera as it sits atop a branch in its enclosure at Wild Life Sydney Zoo in Australia, April 3, 2014. Reuters/David Gray

For a long time, some of the most basic questions in wildlife research were surprisingly hard to answer. Where do wild animals live, if they still live at all? How many are there? What do they eat?

In the past 15 years, the answers have gotten a lot more accessible, due in large part to digital photography. Researchers can now place cameras with big memory cards and motion sensors in remote places where it is difficult for people to go, particularly unnoticed. The cameras can take many pictures without being intrusive. Known as "camera traps," they snap photos when animals walk by, and have revolutionized the study of wildlife.

The Greatest Hits

For years, Roland Kays, a biologist at North Carolina State University, emailed fellow scientists for their camera-trap images and saved them on his computer in a file of what he called the "greatest hits." His collection grew to more than 600 images from 150

researchers in 52 countries. Now they are the centerpiece of Kays' new book, *Candid Creatures*. A "candid" photo is one that is not posed, usually taken without the subject's knowledge. Kays' book chronicles the use - and animal discoveries - of camera traps.

Animal photos have come a long way since American photographer George Shiras first used camera traps to take pictures of deer and other wildlife in the late 19th and early 20th centuries. Some of his photos turned up in the pages of *National Geographic*, a popular magazine about science, nature and animals. But Shiras' remote-controlled cameras had many limitations. They were bulky and heavy, took only one photo at a time, and their flash was created by a dangerous explosion of magnesium powder, Kays said in an interview. Things got better when film came along, he said, but "you were limited to 36 pictures, and then you'd run out of film."

Today's digital cameras can store hundreds of images, and they stand up to heat, rain, animal nibbles and invasive insects. As *The Washington Post* wrote recently, digital images led scientists to conclude that wild animals are spread throughout at least one half of the Chernobyl Exclusion Zone. This area in Ukraine covers the site of the 1986 Chernobyl disaster, the worst nuclear power plant accident in history. No one is allowed inside the zone, which contains radiation that can cause cancer and other health problems.

Worth A Thousand Words

Kays said that camera traps have also helped him discover something new about animal life in Panama. Seeds buried by small rodents there called agoutis are frequently stolen by other rodents, then stolen back by agoutis.

"A picture tells a thousand words," said Kays, who shared some of the images from the book. Maybe a picture is also worth a thousand pieces of information, he added.

Camera-trap images have also helped tiger researchers. They can tell individual animals apart by their different stripe patterns, know more about the big cats' small population and how much prey they need to survive, Kays said. "That's been critical to tiger conservation," he said.

Camera traps can also help researchers keep track of endangered species to make sure that "they're still around," Kays said. In Angola, for example, camera-trap images confirmed that the giant sable antelope had survived the country's long civil war.

Many Coyotes, Few Cats

Using camera traps, Kays and his fellow researchers concluded that feral, or wild, cats are rare in 32 protected areas from South Carolina to Maryland. "That's probably because there's so many coyotes" that eat the cats, Kays said. "We'd get lots of pictures of coyotes, and probably one photo of a cat."

"We definitely get predators with prey in their mouths, and I think that's pretty cool," Kays said.

Quiz

- 1 Which of the following BEST describes Roland Kays' feelings toward camera traps?
 - (A) excited and thankful
 - (B) nervous and skeptical
 - (C) joyful and proud
 - (D) disappointed and confused

- 2 How does the article explain the benefits of camera traps?
 - (A) with stories of how camera traps have helped scientists learn about animals
 - (B) by investigating the common food sources of wildlife in countries that use camera traps
 - (C) by interviewing several scientists who have used camera traps in their work
 - (D) with technical descriptions of how the camera traps work

- 3 Read the following sentence from the introduction [paragraphs 1-2].

The cameras can take many pictures without being intrusive.

Which of the following BEST describes an "intrusive" camera?

- (A) a camera that is outdated
 - (B) a camera that blends in with its surroundings
 - (C) a camera that gets in the way of the animals
 - (D) a camera that captures realistic pictures of animals

- 4 Which of the following adjective pairs from the article BEST conveys the negative aspects of George Shiras' camera traps?
 - (A) difficult and unnoticed
 - (B) bulky and dangerous
 - (C) invasive and digital
 - (D) critical and endangered